

**Statement of Basis
Georgia Pacific Paper Company
502-0001**

Georgia Pacific – Brewton Mill (GP Brewton) has applied for a renewal of its Major Source Operating Permit 502-0001. This proposed Title V Major Source Operating Permit is issued under the provisions of ADEM Admin. Code R. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

I. BACKGROUND:

GP Brewton owns and operates an integrated, bleached Kraft pulp and containerboard mill located in Brewton, Alabama. The GP Brewton, AL site is located in Escambia County, which is classified as a Class II county. The Brewton mill includes the following areas and subareas: Wood-yard, Kraft Pulp Mill, Bleaching Mill, Liquor Recovery, Tall Oil, Recausticizing, Paper Machines, and Utilities. The Mill produces both hardwood and softwood Kraft pulp. The facility is a major source with respect to Title V, PSD, NSPS, and the MACT/NESHAP standards. The Brewton Mill is a major source for the following pollutants: PM, PM₁₀, PM_{2.5}, SO₂, NO_x, CO, Lead, VOCs, Total HAP's, Acetaldehyde, Chloroform, HCl, and Methanol.

II. WOODYARD AND PULP MILL:

The Mill purchases wood chips from offsite suppliers. The wood chips are rechipped, and a conveyor system sends acceptable chips to the pulping area. Fugitive particulate matter is released in this area.

Kraft pulp is produced by cooking chips in digester vessels using chemicals and steam. A portion of the pulp (brown stock) produced is bleached using a five-stage bleaching process. Tall oil and turpentine are manufactured as by-products of the pulping process. There are three types of pulp produced at this facility utilizing the Kraft process: hardwood pulp, softwood pulp, and high yield pulp. The pulp mill has eleven batch digesters, three blow tanks, and one blow heat recovery system.

As wood chips are cooked in the batch digesters, the digesters are vented to a condenser system to recovery turpentine. The cooked chips are sent to blow tanks prior to the knotting/washing operations. Exhaust gases from blow tanks and the blow heat recovery system are incinerated in the Thermal Oxidizer or No. 1 or 2 Lime Kilns.

The high yield pulp is refined and screened and then washed in four-stage, counter current, rotary vacuum drum washers. The washed pulp is then stored in high density chests. Filtrate from the first stage washer filtrate tank is transported to weak black liquor storage tanks. Foam generation is controlled through the use of a foam tank. Emissions from the washer hoods, filtrate tanks, and foam tank are released to atmosphere.

The hardwood and softwood pulp proceeds from blow tanks to knotters prior to being washed in five-stage, counter-current, rotary vacuum drum washers. Filtrate from the first stage washer filtrate tank is transported to weak black liquor storage tanks. Foam generation is controlled through the use of a foam tank. Emissions from the washer hoods, filtrate tanks and foam tank are released to atmosphere.

Weak black liquor from the pulp washing operations is concentrated from approximately 15% to 50% solids utilizing the No. 1 – 3 multiple-effect evaporators sets. Concentrated liquor is stored in black liquor tanks. Emission from the evaporators are transported to the Thermal Oxidizer or the No. 1 or 2 Lime Kilns and incinerated.

A. Kraft Batch Digesters:

The facility has eleven batch digesters, three blow tanks, and one blow heat recovery system. Wood chips are cooked in eleven (11) batch digesters. Digesters are vented to a condenser system to recover turpentine. Cooked chips are sent to blow tanks prior to knotting/washing operations. Exhaust gases from the blow tanks, turpentine decanters, and the blow heat recovery system are transported to the Thermal Oxidizer or the No. 1 or 2 Lime Kilns for incineration.

The pulp mill digesters 1-9 were originally installed in 1957; however, digesters 2 and 4 have recently been reconstructed (2009). Digester 10 was added in 1977, and digester 11 was installed in 1982. The combined rated capacity of pulp (soft, hard, & high yield) these digesters can process is 133,750 lbs/hr of pulp.

1. Control Equipment:

Emissions from the batch digester system are collected and vented to the Non-Condensable Gas (NCG) Collection system. The digester's low volume high concentration gases (LVHC) are required to be collected and treated per 40 CFR Part 63 Subpart S. The Mill has elected to treat the LVHC gases by incineration; thus, the LVHC exhaust gases are sent to the Thermal Oxidizer or the No. 1 & 2 Lime Kilns for incineration.

a. Emission Limits and Proposed Periodic Monitoring:

All eleven digesters are subject to federal National Emission Standards for Hazardous Pollutants (NESHAP) General Provisions as provided for in Table 1 of Subpart S. Digesters 2, 4, 10, and 11 are subject to Federal New Source Performance Standards (NSPS) 40 CFR 60 – Subpart BB because of their reconstruction or installation age. Digesters 1, 3, 5 – 9 are subject to State Total Reduced Sulfur (TRS) standards as defined in Rule 335-3-5-.04(5). For these sources, the Mill has chosen to comply with Subpart BB and the State TRS standards by incinerating all gases in the Thermal Oxidizer or the No. 1 & 2 Lime. The incinerators shall maintain a minimum temperature of 1200 degrees Fahrenheit when the gases are being incinerated, and must subject them to this temperature for at least 0.5 seconds. All LVHC gases are to be collected and incinerated as required by Subpart S.

B. “70/30” Pulp Washing and Screening System:

The function of the pulp washing system is to wash out the residual cooking liquor from the pulp. The 70/30 washing system consists of five washers, five filtrate tanks, two high density tanks, and a foam tank. The filtrate tanks vent through the 70/30 foam tank or the High Yield foam tank. The original installation date was 1957, and the rated capacity of the washers is 74 tons of pulp per hour.

1. Control Equipment:

There is no control equipment for the washer system. Emissions from the pulp washing stages, filtrate chests, and foam tank are vented to the atmosphere. Per 40 CFR Part 63 Subpart S, the Mill has elected to use the Clean Condensate Alternative treatment method for HAPs. The Mill uses “Mill water” instead of condensates to wash the pulp.

a. Emission Limits and Proposed Periodic Monitoring

Per the requirements of 40 CFR Part 63 Subpart S emissions shall be controlled by an approved Clean Condensate Alternative. Per the requirements of 40 CFR 63 Subpart S, vent valve position shall be monitored to determine if the venting to atmosphere or the enclosed vent header.

C. “High Yield” Pulp Washing and Screening System:

The function of the pulp washing system is to wash out the residual cooking liquor from the pulp. The High Yield washing system consists of four washers, four filtrate tanks, two high density tanks, and a

foam tank. The filtrate tanks vent through the foam tank. The original installation date was 1957, and the rated capacity of the washers is 74 tons of pulp per hour.

1. Control Equipment:

There is no control equipment for the washer system. Emissions from the pulp washing stages, filtrate chests, and foam tank are vented to the atmosphere. Per 40 CFR Part 63 Subpart S, the Mill has elected to use the Clean Condensate Alternative treatment method for HAPs. The Mill uses "Mill water" instead of condensates to wash the pulp.

a. Emission Limits and Proposed Periodic Monitoring

Per the requirements of 40 CFR Part 63 Subpart S emissions shall be controlled by an approved Clean Condensate Alternative. Per the requirements of 40 CFR 63 Subpart S, vent valve position shall be monitored to determine if the venting to atmosphere or the enclosed vent header.

D. No. 1 Bleach Plant

Brown hardwood and softwood stock is diluted in the bottom of the high density storage chest and pumped into the bleach plant. The bleaching sequence is carried out continuously in five stages using different chemicals, temperatures and retention times at each stage. The sequence is 1) chlorine dioxide, 2) caustic extraction with oxygen and hydrogen peroxide, 3) chlorine dioxide, 4) caustic extraction, and 5) chlorine dioxide.

The Mill's Bleaching Plant was originally installed in 1957, and has a capacity to produce 88,000 lbs/hr of bleached pulp.

1. Control Equipment:

The bleach plant is equipped with a Dual Laminate Packed Bed wet scrubbing systems to remove residual Cl & ClO₂ fumes from vent exhausts. A weak caustic is used as the scrubbing medium in the packed tower. Vent gases from the towers, washers, and seal tanks in the Bleach Plant where chlorinated bleaching chemical is applied are conveyed to a packed-bed scrubber for treatment. The scrubber is manifolded in a combined stack shared by the No. 2 Bleach Plant and the Chlorine Dioxide Generator Plant.

a. Emission Limits and Proposed Periodic Monitoring

The equipment at each bleaching stage of the bleaching system where chlorinated compounds are introduced is required be enclosed and vented into a closed-vent system and routed to a control device which meets the requirements as specified in 40 CFR Part 63 Subpart S. To reduce chloroform emissions, Brewton has elected to comply with the guidelines as specified in 63.445(d)(1) by not using hypochlorite or chlorine for bleaching in the bleaching system. The Bleach Plant's Cl emissions are limited by 40 CFR Part 63 Subpart S, and the ClO₂ emissions have a limit directed by the Air Toxics Policy. The Bleach Plant's ClO₂ and Cl emission limits are 0.43 lb/hr and 10 ppmv, respectfully. A continuous monitoring system (CMS, as defined in 40 CFR 63 Subpart A General Provisions § 63.2) shall be installed, calibrated, certified, operated, and maintained according to the manufacturer's specifications. The CMS shall include a continuous recorder. The CMS shall be operated to measure the following parameters for each gas scrubber used to comply with the bleaching system requirements of 40 CFR 63 Subpart S § 63.445(c).

- (a) The pH or the oxidation/reduction potential of the gas scrubber effluent;
- (b) The gas scrubber liquid influent flow rate; and
- (c) The bleach plant scrubber ID fan continuous operating status (on/off).

Per the State Only requirements, the Mill is required to perform a ClO₂ emission test and submit a report at least once per 5 year permitting period.

E. Turpentine Recovery:

Turpentine is recovered from several sources within the Kraft Fiberline. The steaming vessel and Flash Tank are vented to the primary and secondary turpentine condensers. The Fractionation Filtrate Tank and the No. 1 Black Liquor Filtrate Tank are vented to the Filtrate Turpentine Condenser. Condensate from these condensers drains to the turpentine separator and then to the decanter. Decanter overflow is collected in the Turpentine Storage Tank for shipment.

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1. Control Equipment:

LVHC NCG gases are collected from the Secondary Turpentine Condenser, the Filtrate Turpentine Condenser, the Turpentine Sill Tank, the Turpentine Separator, the Turpentine Decanter, the Decanter Underflow Tank, and the Turpentine Separator. These gases are conveyed in the Kraft LVHC closed-vent system and burned in either the NCG Thermal Oxidizer or the No. 1 or 2 Lime Kilns. The Turpentine Recovery system LVHC gases are required to be collected and treated per 40 CFR Part 63 Subpart S. The Mill has elected to treat the LVHC gases by incineration.

a. Emission Limits and Proposed Periodic Monitoring

The Turpentine Recovery system is subject to 40 CFR Part 63 Subpart S (MACT I). For this source, all LVHC gases are to be collected and incinerated as required by Subpart S. Subpart S also requires annual testing and monthly inspections of the LVHC NCG system. The Turpentine Recovery system's Subpart S provisos are defined in the Enclosures and Closed - Vent System Permit.

III. CHEMICAL PLANT:

Since chlorine dioxide is an extremely unstable compound at room temperature and pressure and can not be easily stored, Brewton produces it on-site. ClO_2 is generated as a gas from the reaction of sodium chlorate with sulfuric acid using methanol as a catalyst. The gas is absorbed in chilled water. The ClO_2 generating system consists of a generator/crystallizer, reboiler, indirect heat exchanger, generator dump tank, chlorine dioxide absorption tower, scrubber tower, salt cake filter, and vacuum system. The sodium chlorate, sodium chloride, sulfuric acid, and methanol are combined in the generator/crystallizer which produces gaseous chlorine dioxide, a precipitate of salt cake and a trace amount of chlorine gas. The vacuum system pulls the vapors from the generator and into the collection system.

A. Chlorine Dioxide Plant

The Mill operates a Chlorine Dioxide Plant that was originally installed in 2001. This unit has the capacity to produce 3,333 pounds per hour of ClO_2 .

1. Control Equipment:

Gases from the generator are cooled in a heat exchanger. The condensate and gases flow to an absorption tower where chilled water is used to absorb the ClO_2 . The gases that are not absorbed pass through to a barometric condenser, and into the tail gas scrubber. The scrubber also collects the vent gases from the chlorine dioxide storage tanks. The scrubber uses chilled water as its scrubbing medium. The following units vent to the tail gas scrubber: the ClO_2 absorption tower, the salt cakes filter, and the north and south ClO_2 solution storage tanks.

a. Emission Limits and Proposed Periodic Monitoring

The ClO_2 generator is not subject to any federal standards, but there are State air-toxic ClO_2 and Cl emission limits of 0.5 lb/hr and 0.25 lb/hr respectfully. The periodic monitoring for this unit is to measure and record the three hour block average wet scrubber recirculation ORP and scrubber liquid flow rate and perform emissions testing at least once per 5 year permitting period.

III. LIQUOR RECOVERY SYSTEMS:

Weak black liquor is collected from the stock washers in the pulp mill and passed through a set of evaporators and concentrators to raise the solids content of the black liquor. The vapors from the feed stages of the evaporator/concentrator area are sent to the NCG collection system. The concentrated black liquor is then fired in a recovery furnace. The resulting inorganic smelt is then dissolved and sent to the recausticizing area for further processing. The Mill's recovery system consists of the No. 1 - 3 Multiple-Effect Evaporator Sets, No. 1 & 2 Recovery Furnaces, and No. 1 & 2 Smelt Dissolving Tanks. Recovery of cooking chemicals is achieved using direct contact evaporator design.

A. No. 1 – 3 Multiple-Effect Evaporator System Sets:

Black liquor contains the residual pulping chemicals and dissolved organic substances from wood chips. Brewton operates a multiple-effect evaporator system to evaporate weak black liquor, at a concentration of approximately 15% solids, and concentrates it to approximately 50% solids. The Mill operates three separate Multiple-Effect Evaporator Systems. The Kraft Evaporator Systems maintains a vacuum system on the back end, with a foul condensate hot-well. This hot-well is vented to the Kraft LVHC NCG system. The concentrated black liquor is sent to the recovery furnace.

The No. 1 Multi-Effect Evaporator System was originally installed in 1957, and the No. 2 Evaporator System was installed in 1964. Each evaporator set has an operating capacity of 65,833 pounds per hour of black liquor solids. The No. 3 Evaporator was installed in 1971, and later modified in 2002. It has a operating capacity of 89,583 pounds per hour of black liquor solids. are subject to the State only TRS provisos and 40 CFR 63 - Subpart S, whereas, the No. 3 is subject to NSPS Subpart BB for TRS and 40 CFR 63 - Subpart S.

1. Control Equipment:

Emissions from the Kraft Multi-Effect Evaporator Systems and hot-wells are collected then vented to the NCG collection system. The exhaust gases from the evaporators and hot-wells form LVHC gases which are required to be collected and treated per 40 CFR Part 63 Subpart S. The Mill has elected to treat the LVHC gases by incineration; thus, the LVHC exhaust gases are sent to the Lime Kilns or NCG Incinerator for incineration.

a. Emission Limits and Proposed Periodic Monitoring:

The No. 1 & 2 Multi-Effect Evaporator Systems are subject to 40 CFR Part 63 Subpart S (MACT I) for HAPs and subject to Rule 335-3-5-.04(5) for TRS. For these sources, all gases that contain TRS are required to be incinerated in the NCG incinerator or Lime Kiln per the ADEM Rule. Also, per the Subpart S requirements, the evaporator's condensates are collected for treatment and sent to the wastewater treatment plant. Subpart S also requires annual testing and monthly inspections of the LVHC NCG system. The No. 3 unit is subject to 40 CFR 60 Subpart BB for TRS. The Mill treats the TRS emissions from this unit by incineration either in the NCG incinerator or lime kilns.

B. No. 1 Recovery Furnace:

The No. 1 Recovery Furnace burns the organic compounds contained in black liquor to generate steam and recovers the sodium and sulfur compounds used in the Kraft cooking processes. The recovery furnace and its operation can be broken down into several sections: furnace area, convective heat transfer area, combustion air control, black liquor handling, smelt removal and dilution, and air emissions control. The hot gases from the combustion zone pass through the steam generation zone, which includes super-heater, boilers, and economizer.

The Babcock and Wilcox Recovery Furnace was originally installed in 1957. The No. 1 Recovery Furnace produces steam by firing up to 65,833 lbs/hr of black liquor solids. The No. 1 Recovery Furnace is permitted to fire "onsite recycled oil", No. 6 Fuel Oil, and black liquor solids. Fuel oil is primarily fired during periods of start-up, shutdown, and load stabilization events.

1. Control Equipment:

Emissions from the Recovery Furnace are controlled by a wet bottom electrostatic precipitator to control particulate matter emissions. There is a common stack from No. 1 Recovery Boiler, No. 1 Power Boiler, and Thermal Oxidizer.

a. Emission Limits and Proposed Periodic Monitoring:

The No. 1 Recovery Furnace is subject to the following requirements

- Rule 335-3-4-.07 for PM.
- Rule 335-3-5-.04 for Kraft pulp mills for TRS.
- This source is subject to the applicable requirements of ADEM Admin. Code R. 335-3-10-.01 such that the opacity limit is the same as but not subject to the New Source Performance Standards Subpart BB for Kraft recovery furnaces.
- National Emission Standards for Hazardous Pollutants General Provisions as provided for in Table 1 of Subpart MM and 40 CFR Part 63 Subpart MM.
- In accordance with 40 CFR 63 Subpart MM, the Mill was granted an alternative emission standard such that the PM emission limits from the following units are “bubbled together”: No. 1 – 3 Recovery Furnaces, 1 – 3 Smelt Tanks, and 1 & 2 Lime Kiln;
- This unit is not subject to NSPS Subpart D because it does not fire fossil fuels for the purpose of generating steam.

The No. 1 Recovery Furnace has the following limits and monitoring requirements:

PM	$\leq 4 \text{ lb/ADTP}$
TRS	$\leq 20 \text{ ppmv @ } 8\% \text{ O}_2 \text{ (12-hr block average)(State Only)}$
Opacity	$\leq 35\% \text{ (6-min average)}$
HAPS	PM as a surrogate $\leq 0.044 \text{ gr/dscf @ } 8\% \text{ O}_2$

- Brewton shall perform and submit particulate matter emission tests once per year;
- Pursuant to 40 CFR Part 63, Subpart MM the facility must maintain records of any occurrence when corrective action is required when the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity, and when a violation is noted when opacity is greater than 35 percent for 6 percent or more of the operating time within any quarterly period;
- A continuous TRS monitor (CEMs) and continuous opacity monitor (COMs) shall be installed, maintained, and operated;
- For particulate matter and opacity periodic monitoring when the average of any ten consecutive six-minute opacity averages exceeds 20 percent the cause is to be investigated and appropriate corrective action is to be taken within twenty-four hours;
- For particulate matter periodic monitoring, if any three-hour block average liquor firing rate is greater than 110 percent of its average value set by a required periodic test that showed compliance or a test approved by the Department that showed compliance, the feed rate is to be lowered until compliance is successfully demonstrated at the higher rate;
- Brewton is required to submit quarterly excess TRS and Opacity emission reports;
- The facility must also maintain records and documentation of supporting calculations for compliance determinations made under §63.865 (a) through (d);
- The facility shall maintain records of all 6-minute periods when the opacity is greater than 35%;
- Records of all three-hour block average liquor-firing rates shall be made and maintained on file available for inspection for at least five years;

- Pursuant to 40 CFR Part 63, Subpart MM the facility must maintain records of the black liquor firing rates in terms of tons/day or Mg/day.

C. No. 2 Recovery Furnace:

The No. 2 Recovery is a Babcock and Wilcox Recovery Furnace and was originally installed in 1964. It produces steam by firing up to 65,833 lbs/hr of black liquor solids. The No. 2 Recovery Furnace is permitted to fire “onsite recycled oil”, No. 6 Fuel Oil, and black liquor solids. Fuel oil is primarily fired during periods of start-up, shutdown, and load stabilization events.

1. Control Equipment:

Emissions from the Recovery Furnace are controlled by a wet bottom electrostatic precipitator to control particulate matter emissions. There is a common stack from No. 2 Recovery Boiler and No. 2 Power Boiler.

a. Emission Limits and Proposed Periodic Monitoring:

The No. 1 Recovery Furnace is subject to the following requirements

- Rule 335-3-4-.07 for PM.
- Rule 335-3-5-.04 for Kraft pulp mills for TRS.
- This source is subject to the applicable requirements of ADEM Admin. Code R. 335-3-10-.01 such that the opacity limit is the same as but not subject to the New Source Performance Standards Subpart BB for Kraft recovery furnaces.
- National Emission Standards for Hazardous Pollutants General Provisions as provided for in Table 1 of Subpart MM and 40 CFR Part 63 Subpart MM.
- In accordance with 40 CFR 63 Subpart MM, the Mill was granted an alternative emission standard such that the PM emission limits from the following units are “bubbled together”: No. 1 – 3 Recovery Furnaces, 1 – 3 Smelt Tanks, and 1 & 2 Lime Kiln;
- This unit is not subject to NSPS Subpart D because it does not fire fossil fuels for the purpose of generating steam.

The No. 2 Recovery Furnace has the following limits and monitoring requirements:

PM	$\leq 4 \text{ lb/ADTP}$
TRS	$\leq 20 \text{ ppmv @ } 8\% \text{ O}_2 \text{ (12-hr block average)(State Only)}$
Opacity	$\leq 35\% \text{ (6-min average)}$
HAPS	PM as a surrogate $\leq 0.06 \text{ gr/dscf @ } 8\% \text{ O}_2$

- Brewton shall perform and submit particulate matter emission tests once per year;
- Pursuant to 40 CFR Part 63, Subpart MM the facility must maintain records of any occurrence when corrective action is required when the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity, and when a violation is noted when opacity is greater than 35 percent for 6 percent or more of the operating time within any quarterly period;
- A continuous TRS monitor (CEMs) and continuous opacity monitor (COMs) shall be installed, maintained, and operated;
- For particulate matter and opacity periodic monitoring when the average of any ten consecutive six-minute opacity averages exceeds 20 percent the cause is to be investigated and appropriate corrective action is to be taken within twenty-four hours;
- For particulate matter periodic monitoring, if any three-hour block average liquor firing rate is greater than 110 percent of its average value set by a required periodic test that showed

compliance or a test approved by the Department that showed compliance, the feed rate is to be lowered until compliance is successfully demonstrated at the higher rate;

- Brewton is required to submit quarterly excess TRS and Opacity emission reports;
- The facility must also maintain records and documentation of supporting calculations for compliance determinations made under §63.865 (a) through (d);
- The facility shall maintain records of all 6-minute periods when the opacity is greater than 35%;
- Records of all three-hour block average liquor-firing rates shall be made and maintained on file available for inspection for at least five years;
- Pursuant to 40 CFR Part 63, Subpart MM the facility must maintain records of the black liquor firing rates in terms of tons/day or Mg/day

D. No. 3 Recovery Furnace:

The No. 3 Recovery is a Babcock and Wilcox Recovery Furnace and was originally installed in 1971 and later modified in 2002; however, the modification did not trigger new NSPS requirements. It produces steam by firing up to 89,583 lbs/hr of black liquor solids. The No. 3 Recovery Furnace is permitted to fire “onsite recycled oil”, No. 6 Fuel Oil, and black liquor solids. Fuel oil is primarily fired during periods of start-up, shutdown, and load stabilization events.

1. Control Equipment:

Emissions from the Recovery Furnace are controlled by a wet bottom electrostatic precipitator to control particulate matter emissions.

a. Emission Limits and Proposed Periodic Monitoring:

The No. 3 Recovery Furnace is subject to the following requirements

- ADEM Admin. Code 335-3-14-.04 (9) Prevention of Significant Deterioration (PSD) Best Available Control Technology (BACT) limits for sulfur dioxide, VOC, PM, TRS, nitrogen oxides, and carbon monoxide.
- This source is subject to the applicable requirements of ADEM Admin. Code R. 335-3-10-.01 such that the opacity limit is the same as but not subject to the New Source Performance Standards Subpart BB for kraft recovery furnaces.
- National Emission Standards for Hazardous Pollutants General Provisions as provided for in Table 1 of Subpart MM and 40 CFR Part 63 Subpart MM.
- In accordance with 40 CFR 63 Subpart MM, the Mill was granted an alternative emission standard such that the PM emission limits from the following units are “bubbled together”: No. 1 – 3 Recovery Furnaces, 1 – 3 Smelt Tanks, and 1 & 2 Lime Kiln
- This unit is not subject to NSPS Subpart D because it does not fire fossil fuels for the purpose of generating steam.

The No. 2 Recovery Furnace has the following limits and monitoring requirements:

PM	≤ 0.025 gr/dscf @ 8% O ₂ and ≤ 27.9 lbs/hr
TRS	≤ 5 ppmv @ 8% O ₂ (12-hr block average)
NO _x	≤ 112 ppmdv @ 8% O ₂ and < 104 lbs/hr
Opacity	≤ 35 % (6-min average)
SO ₂	≤ 144 ppmdv at 8% O ₂ and/or ≤ 187 lb/hr (3-hr rolling ave.)
CO	≤ 450 ppmdv at 8% O ₂ and/or ≤ 255 lbs/hr.
HAPS	PM as a surrogate ≤ 0.025 gr/dscf @ 8 % O ₂

- Brewton shall perform and submit particulate matter emission tests once per year;
- For particulate matter and opacity periodic monitoring, if the average of any ten consecutive six minute opacity averages exceeds 20% the cause is to be investigated and appropriate corrective action is to be taken;
- For particulate matter, nitrogen oxide, sulfur dioxide, volatile organic compounds, and carbon monoxide periodic monitoring, if any three-hour block average liquor firing rate is greater than 110 percent of its average value set by the respective required periodic test that showed compliance or a test approved by the Department that showed compliance, the feed rate is to be lowered until compliance is successfully demonstrated at the higher rate;
- A continuous TRS monitor (CEMs) and continuous opacity monitor (COMs) shall be installed, maintained, and operated;
- Records of all three hour rolling average black liquor firing rates for this unit shall be maintained for PM, SO₂, VOC, NO_x, and CO periodic monitoring;
- Since this source is subject to MACT II, it is required to submit quarterly excess emission reports and must comply with the monitoring and reporting requirements of Subpart MM;
- Brewton is required to submit quarterly excess TRS and Opacity emission reports; and
- Brewton shall perform and submit an emission test for SO₂, NO_x, VOC, and CO once every five years (historical data has shown emissions are well below limits; thus, the need for only once per five year monitoring).

E. No. 1 Smelt Dissolving Tank:

The No. 1 Smelt dissolving tank uses weak wash to dissolve the inorganic residue from the combustion of black liquor solids in the No. 1 Recovery Furnace. The dissolved smelt which contains a mixture of sodium sulfide and sodium carbonate called “green liquor”, which is then sent to the Mill’s causticizing area for further processing. A Babcock & Wilcox Smelt Dissolving Tank was originally installed in 1957. Its operating capacity is the same as the No. 1 Recovery Furnace

1. Control Equipment:

The vent stack of the dissolving tank is fitted with a Neptune Airpol, Inc wet scrubber. The wet scrubber is used control the entrained particulate matter/HAPs and TRS.

a. Emission Limits and Proposed Periodic Monitoring:

The No. 1 Smelt Dissolving Tank is subject to:

- Rule 335-3-4-.07 for PM.
- Rule 335-3-5-.04 for Kraft pulp mills for TRS;
- In accordance with 40 CFR 63 Subpart MM, the Mill was granted an alternative emission standard such that the PM emission limits from the following units are “bubbled together”: No. 1 – 3 Recovery Furnaces, 1 – 3 Smelt Tanks, and 1 & 2 Lime Kiln;
- ADEM Admin. Code 335-3-4-.01 for opacity; and
- 40 CFR Part 63 Subpart MM.

The No. 1 Smelt Dissolving Tank has the following limits and monitoring requirements:

PM	≤ 0.5 lbs/ADTP
TRS	≤ 0.033 lb/ton of BLS
Opacity	≤ 20 % with one 6-minute period up to 40 % in any one hour period.
HAPS	PM as a surrogate for HAPS ≤ 0.11 gr/dscf

- Brewton shall perform and submit particulate matter emission tests once per year;

- For PM periodic monitoring, Brewton shall monitor and maintain records of all the three-hour block average liquor firing rate;
- For PM periodic monitoring, Brewton shall monitor and maintain records of all the three-hour rolling average scrubber recirculation flow rate or pressure drop;
- For TRS periodic monitoring, Brewton shall monitor and maintain records of all the three-hour rolling average wet scrubber weak wash makeup flow rates and pH values;
- Brewton shall perform and submit a TRS emission test once every five years, and
- Since this source is subject to MACT II, it is required to submit quarterly excess emission reports and must comply with the monitoring and reporting requirements of Subpart MM; and
- Pursuant to 40 CFR Part 63, Subpart MM, Brewton shall monitor the wet scrubber flow rates.

F. No. 2 Smelt Dissolving Tank:

A Babcock & Wilcox Smelt Dissolving Tank was originally installed in 1964. Its operating capacity is the same as the No. 2 Recovery Furnace.

1. Control Equipment:

The vent stack of the dissolving tank is fitted with a Neptune Airpol, Inc wet scrubber. The wet scrubber is used control the entrained particulate matter/HAPs and TRS.

a. Emission Limits and Proposed Periodic Monitoring:

The No. 2 Smelt Dissolving Tank is subject to:

- Rule 335-3-4-.07 for PM.
- Rule 335-3-5-.04 for Kraft pulp mills for TRS;
- In accordance with 40 CFR 63 Subpart MM, the Mill was granted an alternative emission standard such that the PM emission limits from the following units are “bubbled together”: No. 1 – 3 Recovery Furnaces, 1 – 3 Smelt Tanks, and 1 & 2 Lime Kiln;
- ADEM Admin. Code 335-3-4-.01 for opacity; and
- 40 CFR Part 63 Subpart MM.

The No. 2 Smelt Dissolving Tank has the following limits and monitoring requirements:

PM	≤ 0.5 lbs/ADTP
TRS	≤ 0.033 lb/ton of BLS
Opacity	≤ 20 % with one 6-minute period up to 40 % in any one hour period.
HAPS	PM as a surrogate for HAPS ≤ 0.11 gr/dscf

- Brewton shall perform and submit particulate matter emission tests once per year;
- For PM periodic monitoring, Brewton shall monitor and maintain records of all the three-hour block average liquor firing rate;
- For PM periodic monitoring, Brewton shall monitor and maintain records of all the three-hour rolling average scrubber recirculation flow rate or pressure drop;
- For TRS periodic monitoring, Brewton shall monitor and maintain records of all the three-hour rolling average wet scrubber weak wash makeup flow rates and pH values;
- Brewton shall perform and submit a TRS emission test once every five years, and
- Since this source is subject to MACT II, it is required to submit quarterly excess emission reports and must comply with the monitoring and reporting requirements of Subpart MM; and
- Pursuant to 40 CFR Part 63, Subpart MM, Brewton shall monitor the wet scrubber flow rates.

G. No. 3 Smelt Dissolving Tank:

A Babcock & Wilcox Smelt Dissolving Tank was originally installed in 1971. Its operating capacity is the same as the No. 3 Recovery Furnace.

1. Control Equipment:

The vent stack of the dissolving tank is fitted with a Neptune Airpol, Inc wet scrubber. The wet scrubber is used control the entrained particulate matter/HAPs and TRS.

a. Emission Limits and Proposed Periodic Monitoring:

The No. 3 Smelt Dissolving Tank is subject to:

- Rule 335-3-4-.07 for PM.
- Rule 335-3-5-.04 for Kraft pulp mills for TRS;
- In accordance with 40 CFR 63 Subpart MM, the Mill was granted an alternative emission standard such that the PM emission limits from the following units are “bubbled together”: No. 1 – 3 Recovery Furnaces, 1 – 3 Smelt Tanks, and 1 & 2 Lime Kiln;
- ADEM Admin. Code 335-3-4-.01 for opacity; and
- 40 CFR Part 63 Subpart MM.

The No. 3 Smelt Dissolving Tank has the following limits and monitoring requirements:

PM	≤ 0.5 lbs/ADTP
TRS	≤ 0.033 lb/ton of BLS
Opacity	≤ 20 % with one 6-minute period up to 40 % in any one hour period.
HAPS	PM as a surrogate for HAPS ≤ 0.11 gr/dscf

- Brewton shall perform and submit particulate matter emission tests once per year;
- For PM periodic monitoring, Brewton shall monitor and maintain records of all the three-hour block average liquor firing rate;
- For PM periodic monitoring, Brewton shall monitor and maintain records of all the three-hour rolling average scrubber recirculation flow rate or pressure drop;
- For TRS periodic monitoring, Brewton shall monitor and maintain records of all the three-hour rolling average wet scrubber weak wash makeup flow rates and pH values;
- Brewton shall perform and submit a TRS emission test once every five years, and
- Since this source is subject to MACT II, it is required to submit quarterly excess emission reports and must comply with the monitoring and reporting requirements of Subpart MM; and
- Pursuant to 40 CFR Part 63, Subpart MM, Brewton shall monitor the wet scrubber flow rates.

IV. RECAUSTICIZING SYSTEM:

The Reausticizing area and the Lime Kilns are integral to the recovery of pulping chemicals and the conversion of the pulping chemicals back to active ingredients. The function of the recausticizing system is to chemically convert green liquor from the smelt dissolving tank into white liquor. The green liquor from the smelt dissolving tank is combined with reburned lime from the lime kiln. Then it is transferred to an agitated tank known as a slaker. Next, the slurry is transferred from the causticizer to a clarifier to settle out the lime mud, and the white liquor is pumped to a white liquor storage tank for use in the digester.

A. No. 1 Lime Kiln:

The clarified lime mud slurry is pumped from the mud storage tank and is then vacuumed filtered to remove the sodium compounds and water. The high solids lime mud is then fed to a rotary kiln where it is dried and burned to drive off the CO₂ and recover the lime to be re-used in the recausticizing process. The lime kiln is currently permitted to fire natural gas, Crude Tall Oil, No. 6 Fuel Oil, and PetCoke.

The Allis Chalmers lime kiln was originally installed in 1956. It has the capacity to produce 13,667 tons/yr CaO.

1. Control Equipment:

The lime kiln is equipped with a venturi scrubber to control particulate matter/HAPs and TRS emissions. The lime kiln is used to control the LVHC and NCG gases at the mill.

a. Emission Limits and Proposed Periodic Monitoring:

The Lime Kiln is subject to:

- the requirements of ADEM Admin. Code 335-3-5-.04 for TRS (state only);
- the requirements of ADEM Admin. Code 335-3-4-.01 for opacity;
- In accordance with 40 CFR 63 Subpart MM, the Mill was granted an alternative emission standard such that the PM emission limits from the following units are “bubbled together”: No. 1 – 3 Recovery Furnaces, 1 – 3 Smelt Tanks, and 1 & 2 Lime Kiln;
- the requirements of ADEM Admin. Code 335-3-4-.07(2)(c) for particulate matter; and
- 40 CFR Part 63 Subpart MM (MACT II) for HAPs.

The Lime Kiln has the following limits:

PM	≤ 1.0 lb/ADTP
TRS	≤ 20.0 ppm _{dv} @ 10% O ₂ (12-hr block average)
Opacity	≤ 20 % with one six-minute period up to 40% in any one hour period
HAPS	PM as a surrogate ≤ 0.095 gr/dscf @ 10 % O ₂

- Brewton shall perform and submit particulate matter emission tests once per year;
- A continuous TRS monitor (CEMs) shall be installed, maintained, and operated;
- Records of all three hour rolling average lime mud feed rate for this unit shall be maintained for at least five years for PM periodic monitoring;
- Records of all three hour rolling average wet scrubber pressure drop or liquid flow rate for this unit shall be maintained for at least five years for PM periodic monitoring;
- A report of excess total reduced sulfur emissions will be submitted to the Department for each calendar quarter; and
- Since this source is subject to MACT II, it is required to submit quarterly excess emission reports and must comply with the monitoring and reporting requirements of Subpart MM.

B. No. 2 Lime Kiln:

The Allis Chalmers lime kiln was originally installed in 1964. It has the capacity to produce 13,667 tons/yr CaO.

1. Control Equipment:

The lime kiln is equipped with a venturi scrubber to control particulate matter/HAPs and TRS emissions. The lime kiln is used to control the LVHC and NCG gases at the mill.

a. Emission Limits and Proposed Periodic Monitoring:

The Lime Kiln is subject to:

- the requirements of ADEM Admin. Code 335-3-5-.04 for TRS (state only);
- the requirements of ADEM Admin. Code 335-3-4-.01 for opacity;
- In accordance with 40 CFR 63 Subpart MM, the Mill was granted an alternative emission standard such that the PM emission limits from the following units are “bubbled together”: No. 1 – 3 Recovery Furnaces, 1 – 3 Smelt Tanks, and 1 & 2 Lime Kiln;
- the requirements of ADEM Admin. Code 335-3-4-.07(2)(c) for particulate matter; and
- 40 CFR Part 63 Subpart MM (MACT II) for HAPs.

The Lime Kiln has the following limits:

PM	≤ 1.0 lb/ADTP
TRS	≤ 20.0 ppm _{dv} @ 10% O ₂ (12-hr block average)
Opacity	≤ 20 % with one six-minute period up to 40% in any one hour period
HAPS	PM as a surrogate ≤ 0.095 gr/dscf @ 10 % O ₂

- Brewton shall perform and submit particulate matter emission tests once per year;
- A continuous TRS monitor (CEMs) shall be installed, maintained, and operated;
- Records of all three hour rolling average lime mud feed rate for this unit shall be maintained for at least five years for PM periodic monitoring;
- Records of all three hour rolling average wet scrubber pressure drop or liquid flow rate for this unit shall be maintained for at least five years for PM periodic monitoring;
- A report of excess total reduced sulfur emissions will be submitted to the Department for each calendar quarter;

Since this source is subject to MACT II, it is required to submit quarterly excess emission reports and must comply with the monitoring and reporting requirements of Subpart MM

V. UTILITIES:

Brewton’s utility area consists of Power Boilers 1 – 3 and a Package Boiler to generate steam and electricity to support the mill’s operations.

A. No. 1 Power Boiler

The No. 1 Power boiler is a 258.8 MMBtu/hr boiler that generates steam and is permitted to burn natural gas, No. 6 Fuel Oil, and No. 2 Fuel Oil. The boiler was originally installed in 1957. There is a common stack for the No. 1 Recovery Boiler, No. 1 Power Boiler, and the Thermal Oxidizer.

1. Control Equipment:

There is no control device on this unit.

a. Emission Limits and Proposed Periodic Monitoring:

The No. 1 Power Boiler is subject to:

- the requirements of ADEM Admin. Code 335-3-4-.038 for particulate matter;
- the requirements of ADEM Admin. Code 335-3-5-.01 for sulfur dioxide; and
- the requirements of ADEM Admin. Code 335-3-4-. 01 for opacity.

The No. 1 Power Boiler has the following limits:

PM	≤ 0.12 lbs/MMBtu
SO ₂	≤ 4.0 lbs/BTU heat input
Opacity	≤ 20% with one six-minute period up to 40% in any one hour period

- Yearly emissions tests will be required for particulate matter;
- Records of all three hour block average fuel oil firing rate for this unit shall be maintained for at least five years for PM;
- For opacity periodic monitoring when the No. 1 Power Boiler is firing No. 6 fuel oil, once per day, (weather permitting) one-minute visible emissions readings of plume opacity shall be made and recorded (4 readings taken approximately every 15 seconds) by a person trained in, but not necessarily certified by, EPA Reference Method 9. If the opacity appears to be above 15 percent, immediate action to identify and correct the cause of the visible emissions is to be taken. After corrective action has been taken, another one-minute observation shall be taken of the stack's opacity. If the opacity observed does not appear to be in excess of 15%, then no further action is needed. If visible emissions still appear to be in excess of 15%, a 6-minute visible emissions reading shall be conducted before the end of the day by a person certified in EPA Reference Method 9 to determine if the opacity is 20% or less. If the observed opacity is 20% or less, no further action is needed. If no Method 9 reading is conducted despite emissions appearing to be in excess of 15% after corrective action has been taken, the source shall be considered out of compliance with the particulate matter and opacity monitoring parameters for that day. If the required Method 9 reading is not taken due to weather conditions, one shall be taken the next day that weather conditions permit;
- Anytime No. 6 fuel oil is fired, records of daily one-minute visible emissions readings shall be made and maintained on file available for inspection for a period of five years;
- An excess emission report for opacity shall be submitted to the Department each calendar quarter;
- For SO₂ periodic monitoring obtain receipts from the fuel oil supplier that certify sulfur content in fuel for the calendar year and maintain vendor oil specification on file for at least five years; and

B. No. 2 Power Boiler

The No. 2 Power boiler is a 389 MMBtu/hr boiler that generates steam and is permitted to burn natural gas No. 2 & 6 Fuel Oil, Wood Residue (Wastewater treatment sludge), and wood waste. The boiler was originally installed in 1964. The boiler shares a stack with the No. 2 Recovery Furnace.

1. Control Equipment:

Flue gas quality from this boiler is controlled by an Electrostatic Precipitator. The ESP helps to control PM emissions. The No. 2 Power Boiler is used to control the LVHC and HVLC gases at the mill.

a. Emission Limits and Proposed Periodic Monitoring:

The No. 2 Power Boiler is subject to:

- This source is subject to the requirements of ADEM Admin. Code 335-3-4-.08(2(a-d) for particulate matter from wood waste boilers;
- This source is subject to the requirements of Rule 335-3-4-.03 for particulate matter from fuel burning equipment;
- This source is subject to the requirements of ADEM Admin. Code 35-3-5-.01 for sulfur dioxide from fuel combustion;
- This source is subject to the applicable requirements of Rule 335-3-11-.02(2) 40 CFR 61 - Subpart E for mercury when biomass is fired; and
- This source is subject to the requirements of ADEM Admin. Code 335-3-4-.04 & 335-3-4-.05 for opacity.

The No. 2 Power Boiler has the following limits:

PM	≤ 0.12 lbs/MMBtu, for gas and combination of gas & oil
SO ₂	≤ 4.0 lbs/MMBtu.

PM	Shall not exceed: (a) 0.17 gr/SDCF, adjusted to 50% excess air for combination of gas & wood residue. (b) 0.20 gr/SDCF, adjusted to 50% excess air for combination of oil and wood residue or wood residue only.
Hg	≤ 3200 grams per 24-hour period. (when firing Wastewater Treatment Plant Residuals)
Opacity	Shall not exceed opacity requirements as defined by Rule 335-3-4-.04 & Rule 335-3-4-.05.

- Yearly emissions tests will be required for particulate matter;
- Records of all three hour block average steam production rate for this unit shall be maintained for at least five years for PM periodic monitoring;
- A continuous opacity monitor (COMs) shall be installed, maintained, and operated;
- For SO₂ periodic monitoring obtain receipts from the fuel oil supplier that certify sulfur and BTU content in fuel oil and natural gas for the calendar year and maintain vendor oil specification on file for at least five years; and
- Brewton is required to submit quarterly excess opacity emission reports; and
- Brewton shall perform and submit an emission test for SO₂ at least once every five years.

C. No. 3 Power Boiler

The No. 3 Power boiler is a 608 MMBtu/hr boiler that generates steam and is permitted to burn No. 2 Fuel Oil, Wood Residue (Wastewater treatment sludge), and wood waste. The boiler was originally installed in 1981.

1. Control Equipment:

Flue gas quality from this boiler is controlled by a multi-cyclone and electrostatic precipitator. The multi-cyclone and ESP helps to control PM emissions. .

b. Emission Limits and Proposed Periodic Monitoring:

The No. 3 Power Boiler is subject to:

- This source is subject to the applicable requirements of ADEM Admin. Code R 335-3-10-. 02 New Source Performance Standards Subpart D and /or ADEM Admin. Code R. 335-3-14-.04 for particulate matter, sulfur dioxide, nitrogen oxide, and opacity emissions; and
- This source is subject to the applicable requirements of Rule 335-3-11-.02(2) 40 CFR 61 - Subpart E for mercury when biomass is fired.

The No. 3 Power Boiler has the following limits:

PM	≤ 0.10 lbs/MMBtu
SO ₂	≤ 0.8 lbs/MMBtu.
NOx	≤ 0.3 lbs/MMBtu.
Hg	≤ 3200 grams per 24-hour period. (when firing Wastewater Treatment Plant Residuals)
Opacity	≤ 20% with one six-minute period up to 27% in any hour

- Yearly emissions tests will be required for particulate matter;
- Records of all three hour block average steam production rate for this unit shall be maintained for at least five years for PM and NOx periodic monitoring;

- A continuous opacity monitor (COMs) shall be installed, maintained, and operated;
- For SO₂ periodic monitoring obtain receipts from the fuel oil supplier that certify sulfur and BTU content in fuel oil for the calendar year and maintain vendor oil specification on file for at least five years; and
- Brewton is required to submit quarterly excess opacity emission reports; and
- Brewton shall perform and submit an emission test for NO_x & SO₂ at least once every five years.

D. Package Boiler

The Package boiler is a 51.4 MMBtu/hr boiler that generates steam and is permitted to burn natural gas. The boiler was originally installed in 1966 and was modified in 1994.

1. Control Equipment:

Flue gas quality from this boiler is not currently controlled.

c. Emission Limits and Proposed Periodic Monitoring:

The Package Boiler is subject to:

- This source is subject to the requirements of ADEM Admin. Code 335-3-4-.03 for particulate matter from Fuel Burning Equipment;
- This source is subject to the requirements of ADEM Admin. Code 335-3-5-.01 for sulfur dioxide from Fuel Combustion;
- This source is subject to the requirements of ADEM Admin. Code 335-3-10-.02(2)(c) Small Industrial-Commercial-Institutional Steam Generating Units (Subpart Dc); and
- This source is subject to the requirements of ADEM Admin. Code 335-3-4-.01 for opacity.

The Package Boiler has the following limits:

PM	≤ 0.24 lbs/MMBtu
SO ₂	≤ 4.0 lbs/MMBtu.
Opacity	≤ 20% with one six-minute period up to 27% in any hour

- For sulfur dioxide periodic monitoring obtain natural gas vendor guarantee of sulfur in fuel once per year.

VI. NCG THERMAL OXIDATION SYSTEM:

NCGs and LVHC gases are collected from the digester and evaporator areas. The collected gases are combusted in the NCG thermal oxidizer. In the event the Lime Kilns are out of service, the collected gases are directed to the Thermal Oxidizer.

A. NCG Thermal Oxidation System:

The NCG Thermal Oxidation System incinerates NCG and LVHC gases. The NCG Thermal Oxidation System has a capacity of 30 MMBtu/hr while firing natural gas. It is permitted to also fire natural gas and is permitted to be operated 8760 hours per year.

1. Control Equipment:

The NCG Thermal Oxidation System is equipped with an absorption tower wet scrubber to treat SO₂ emissions. The thermal oxidizer itself is considered a control device and is used to control the LVHC gases at the mill.

a. Emission Limits and Proposed Periodic Monitoring:

The NCG Thermal Oxidation System is subject to:

- The requirements of ADEM Admin. Code 335-3-14-.04(8)(m) Environmentally Beneficial Project limits for particulate matter, sulfur dioxide, and nitrogen oxides;
- 40 CFR Part 63 Subpart S (MACT I) for HAPs; and
- the requirements of ADEM Admin. Code 335-3-4-. 01 for opacity.

The NCG Thermal Oxidation System has the following limits and monitoring requirements:

PM	≤ 10.0 lbs/hr
NO _x	≤ 72.7 lbs/hr
SO ₂	≤ 91.49 lbs/hr
HAPS	Incineration

- Yearly emissions tests will be performed and submitted for particulate matter;
- Records of the three hour block average wet scrubber liquid flow rate and pH for this unit shall be maintained for SO₂;
- Records of all three hour rolling average wet scrubber liquid flow rate for this unit shall be maintained for PM periodic monitoring;
- For HAPs periodic monitoring a continuous monitoring system shall be operated to measure the temperature in the NCG Incinerator firebox or in the ductwork immediately downstream of the firebox and before any substantial heat exchange occurs;
- For hazardous air pollutant periodic monitoring a continuous monitoring system shall be operated to measure the temperature in the thermal oxidizer firebox or in the ductwork immediately downstream of the firebox and before any substantial heat exchange occurs; and
- Brewton shall perform and submit an emission test for SO₂, and NO_x, once every five years.

VII. RICE MACT GENERATORS:

The facility uses several generators around the facility for emergency purposes, and based on an audit of its generators, it was determined that all of their generators are subject to the RICE MACT. All of the existing generators are only subject to 40 CFR 63 Subpart – ZZZZ. None of the generators/engines are subject to 40 CFR 60 Subpart JJJJ or to 40 CFR 60 Subpart IIII because each were installed prior to the date that would make them applicable to the standards.

A. RICE MACT GENERATORS:

The Shipping Emergency Fire Pump Generator has a diesel fuel fired, 208 maximum horsepower, 4-stroke, compression ignition engine. The generator was originally installed in 1992, and later modified in 2010. The Warehouse Emergency Fire Pump Generator has a diesel fuel fired, 240 maximum horsepower, 4-stroke, compression ignition engine. The generator was originally installed in 1981. The Lime Kiln Spare Emergency Engine has a diesel fuel fired, 30 maximum horsepower, 4-stroke, compression ignition engine. The generator was originally installed in 1973. The No. 1 Lime Kiln Emergency Engine has a diesel fuel fired, 30 maximum horsepower, 4-stroke, compression ignition engine. The generator was originally installed in 1973. The No. 2 Lime Kiln Emergency Engine has a diesel fuel fired, 30 maximum horsepower, 4-stroke, compression ignition engine. The generator was originally installed in 1973. The Ash Pond Emergency Engine has a diesel fuel fired, 170 maximum horsepower, 4-stroke, compression ignition engine. The generator was originally installed in 2005.

1. Control Equipment:

The emergency generators have no add on control equipment installed. It is required to use a “work practice standard” for VOC.

a. Emission Limits and Proposed Periodic Monitoring:

- For all units, opacity shall not exceed twenty percent as determined by six-minute average. During one six-minute period in any sixty-minute period, a person may discharge into the atmosphere from any source of emission, particulate of an opacity not greater than that designated as forty percent;
- All units, beginning on or before May 3, 2013, shall comply with the emission limitations in 40 CFR 63 Subpart ZZZZ Table 2c (1);
- All units, beginning on or before May 3, 2013, shall be operated according to the requirements in 63.6640(f)(1)(i) through (iii);
- All units and after-treatment control device (if any), beginning on or before May 3, 2013, shall be operated and maintained according to the manufacturer's emission-related written instructions, or the facility develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions;
- Beginning on or before May 3, 2013, for all units, the facility must minimize engine time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. The emission standards in Table 2c of 40 CFR 63 Subpart ZZZZ apply to all times other than startup;
- No later than May 3, 2013, the facility must install a non-resettable hour meter and monitor all units according to the requirements of §63.6625(f) and §63.6635;
- No later than May 3, 2013, the facility shall monitor and collect data according to the requirements of §63.6635;
- Beginning on or before May 3, 2013, for all units, the facility shall keep records of the operation of the engine in emergency and non-emergency service, which is recorded through the non-resettable hour meter. The owner shall record the time of operation of the engine and the reason the engine was in operation during that time. These records shall be retained onsite for inspection purposes for a period of at least five years;
- Beginning on or before May 3, 2013, the facility shall keep records in accordance with §63.6655 for the all units;
- In accordance with §63.6640, beginning on or before May 3, 2013, the facility shall report, for all units, each instance in which it did not meet each operating limitation in Table 2c. These instances are deviations from the operating limitation and they must be reported according to the requirements in 63.6650(d) and (f);
- Beginning on or before May 3, 2013, for all units, the facility shall submit semiannual and annual compliance reports. The compliance reports shall include the reporting requirements of 36.6650(c) and (d) if there is a deviation; and
- If any of the existing units are reconstructed, the facility shall submit an Initial Notification.

VIII. CAM:

CAM applies to pollutant specific emission units that are subject to an emission limitation or standard where a control device is used to achieve compliance with an applicable emission limitation. The CAM rule requires facilities to monitor compliance indicators for emission units to provide reasonable assurance for compliance with regulatory emission limitations. The following units are subject to the CAM rule: No. 2 & 3 Power Boilers, No. 1 & 2 Lime Kilns, Batch Digesters, R-8 Chlorine Generator, No. 1 – 3 Smelt Dissolving Tanks, and NCG Incinerator. The other units fall under one of the several exemptions as defined by 40 CFR 64.2(b).

The following are the exemptions that apply to one or more emission units operated by the mill:

- The requirements of Part 64 shall not apply to emission limitations or standards proposed by EPA after November 15, 1990, pursuant to section 111 or 112 of the Clean Air Act (40 CFR 64.2(b)(1)(i));
- The requirements of Part 64 shall not apply to emission limitations or standards for those unit that do not uses a control device to achieve compliance with any such emission limitation or standard;
- The requirements of Part 64 shall not apply to emission limitations or standards for those units where the pre-controlled emissions of specific pollutants would not classify unit as a major source; and
- The requirements of Part 64 shall not apply to emission limitations or standards for which a Part 70 or 71 permit specifies a continuous compliance determination method (40 CFR 64.2(b)(1)(vi)).

For the units that are subject to CAM, the Title V Permit currently requires continuous monitoring, which satisfies the CAM rule that requires facilities to monitor compliance indicators for emission units to provide reasonable assurance for compliance with regulatory emission limitations.

- No. 2 Power Boiler (PM) – continuous monitoring of PM correlates with COMs;
- No. 3 Power Boiler (PM) – continuous monitoring of PM correlates with COMs
- No. 1 & Lime Kilns (TRS) – continuous monitoring (CEMS) for TRS;
- Digesters 1,3, 5-9 (TRS) – continuous monitoring of the incineration time and temperature;
- Chlorine Generators (ClO₂ & Cl) – continuous monitoring of wet scrubber recirculation ORP;
- Thermal Oxidizer (SO₂) – continuous monitoring of wet scrubber liquid flow rate and pH; and
- No. 1 – 3 Smelt Tanks (TRS) – continuous monitoring of scrubber weak-wash flow rate.

For Power Boilers 2 & 3, the facility has also proposed additional parametric monitoring to satisfy CAM. They have proposed in their CAM Plan to monitor the ESP secondary voltage for the PM emission limit. The facility's CAM Plan is attached.



C. Scott Sanders
Industrial Chemicals Section
Chemical Branch
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Alabama Dept. of Environmental Management

10-30-12
Date